S p e c i f i c a t i o n

Be It Known That I, **VITO FRANK ASARO** a citizen of the United States of America, resident of San Diego County , State of California, have invented a new and useful

SOUND BAFFLE FOR PORTABLE TELEPHONE HANDSET

of which the following is a specification:

Prior Application

This is a continuation-in-part of provisional application Serial Number 60/393,646 filed July 5, 2002.

Field of the Invention

This invention relates to sound conditioning and damping structures, and more particularly to a combination of said structures with telephone handsets

Background of the Invention

Wireless portable telephone handsets and in particular cellular telephone handsets tends to be very small size. Consequently, the distance between the speaker which a user commonly applies to one ear and the microphone can be less than 10 centimeters placing the microphone next to the user's cheek rather than the mouth. The microphone picks up only part of the sound waves emitted by the user forcing the latter to speak rather loudly to the detriment of privacy and the annoyance of surrounding persons. Because of the distance between the user's mouth and the microphone, the latter must be rather sensitive and yet cannot be unidirectional. Accordingly, the microphone tends to pick up a great deal of ambient noise.

The prior art has provided various types of muffling structures that can be attached to the mouthpiece of a telephone handset. U.S. Patent No. 5,778,062 Vanmoor discloses a number of such handset attachments that do not

take into account the reduced distance between the microphone and the earpiece speaker and, therefore, are not particularly useful in connection with the miniature handset so popular nowadays.

The instant invention results from attempts to overcome the disadvantages of the devices of the prior art.

Summary of the Invention

The principal and secondary objects of this invention are to provide a convenient and compact attachment to a portable telephone handset that can be deployed to form an effective guide for the sound waves emitted by the user, damp ambient noise and lower the sound volume necessary to ensure an effective communication, while at the same time muffle the user's voice for privacy.

These and other valuable objects are achieved by a series of telescopically engaged and extendible cradle-forming components in which the smallest and central one is shaped and dimensioned to tightly nest a miniature telephone handset. The most distally extended component has an hinged cover that can be obliquely oriented to reflect the speaker's sound waves toward the microphone of the handset, and muffle their propagation in other directions for improved privacy.

The attachment can be conveniently collapsed around the handset without significantly increasing its weight and volume.

Brief Description of the Drawing

Figure 1 is a perspective view of a baffle device mounted on a miniature portable telephone handset and shown in the folded position;

Figure 2 is a top plan view thereof;

Figure 3 is a side view of the handset and baffle device shown in its deployed position;

Figure 4 is a side view of an alternate embodiment of the reflector plate; and

Figure 5 is a top plan view thereof.

Description of the Preferred Embodiment of the Invention

Referring now to the drawing, there is shown in Figure 1, a foldable sound baffle **1** mounted on a portable telephone handset **2**. The baffle is shown in its folded position while the handset is not in use for voice communication.

As more specifically illustrated in Figures 2 and 3, the baffle **1** comprises a first cradle **3** having a bottom plate **4** substantially commensurate with the back panel **5** of the handset and mounted contiguously against said back panel.

A first pair of side rails **6** projects upwardly from lateral edges of the bottom plate and against the side walls **7** of the handset. The upper edges of the side rails form a pair of curved flanges **8** that extend over marginal, lateral sections on the front panel **10** of the handset. The first cradle **3** is internally shaped and dimensioned to intimately, yet slidingly, engage over the back panel, side wall and

front panel marginal sections of the handset.

A second cradle **11** has a bottom plate **12** and side rails **13** with flanged upper edges **14** that intimately, but slidingly wrap around the first cradle. A pair of nibs **15** projecting laterally from the flanged corner of the second cradle about its most proximal end come into contact with a pair of barriers **16** projecting from the flanged edges of the first cradle about the most distal half of that first cradle, in order to prevent disengagement of the second cradle from the first cradle when the second cradle is pulled distally into the deployment position illustrated in Figure 3.

A cover plate **17** is hingedly, i.e., rotatively connected along a proximal edge to the distal edge **18** of the second cradle. The plate can be obliquely and adjustably oriented in relation to the second cradle to act as a sound wave reflector that can direct the sound waves emitted by the handset user toward the microphone **19** located in a distal section of the front panel **10** and shown in dotted line in Figure 1. The cover plate **17** is preferably fitted with a third pair of side rails **20** to form with the two cradles a voice-guiding open top-channel.

As illustrated in Figure 3, it should be noted that the voice carrying channel can be extended by pulling the handset **2** partially out of the first cradle **3**.

A pair of triangular, extensible or foldable webs **21** are spread between the cover plate **17** and the upper edge of

the second rail in order to form an adjustable sound barrier on either side of the sound guiding channel.

Figures 4 and 5 illustrate an alternate embodiment **22** of the cover plate that also includes an additional voice reflector **23** hingedly secured to the most distal edge **24** of the cover plate. A pair of rigid, triangular flaps **25** hingedly connected to the lower edges of the cover plate's side rails form a cup about the user's mouth acting as a convenient sound barrier fulfilling the same function as the triangular webs **21** of Figure 3.

It should be noted that the same type of collapsible voice muffler and sound baffle can be used in connection with a variety of voice communication handsets including portable two-way radio sets.

While the preferred embodiments of the invention has been described, modifications can be made and other embodiments may be devised without departing from the spirit of the invention and the scope of the appended claims.

WHAT IS CLAIMED IS: